

**AMENDMENTS TO THE SPECIFICATION**

Please delete the paragraph at page 30, lines 10-25, and replace it with the following:

A fluorescent protein gene was isolated from coral. *Montipora* sp. was used as a material. A frozen *Montipora* sp. was crushed in a mortar, and 7.5 ml of ~~"TRIzol"~~ TRIZOL (reagent for RNA preparation/isolation) (GIBCO BRL) was then added to 2 g (wet weight) of the crushed *Montipora* sp. Thereafter, the obtained mixture was homogenized and then centrifuged at 1,500 x g for 10 minutes. Thereafter, 1.5 ml of chloroform was added to the obtained supernatant, and the mixture was then stirred for 15 seconds. Thereafter, the mixture was left at rest for 3 minutes. The resultant was then centrifuged at 7,500 x g for 15 minutes. Thereafter, 3.75 ml of isopropanol was added to the obtained supernatant, and the mixture was then stirred for 15 seconds, followed by leaving the mixture at rest for 10 minutes. Thereafter, the resultant was centrifuged at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and 6 ml of 70% ethanol was added to the residue, followed by centrifugation at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and the precipitate was then dissolved in 200  $\mu$ l of DEPC water. Total RNA dissolved in the DEPC water was 100 times diluted, and the values of O.D.260 and O.D.280 were then measured, so as to determine RNA concentration. As a result, 22  $\mu$ g of total RNA was obtained.

Please delete the paragraph at page 31, lines 6-26, and replace it with the following:

Primers were produced by making comparison among the amino acid sequences of known fluorescent proteins, extracting similar portions, and converting them to nucleotide sequences.

Primers used:

5'-GAAGGRTGYGTCAAYGGRCAY-3' (primer 1) (SEQ ID NO: 15)

5'-ACVGGDCCATYDGVAAAGAAARTT-3' (primer 2) (SEQ ID NO: 16)

I represents inosine; R represents A or G; Y represents C or T; V represents A, C, or G; D represents A, G, or T; S represents C or G; H represents A, T, or C

Composition of PCR reaction solution:

Template (first strand cDNA) 3  $\mu$ l

X10 taq TAQ (polymerase) buffer 5  $\mu$ l

2.5 mM dNTPs	4 µl
100 µM primer 1	1 µl
100 µM primer 2	1 µl
<u>Milli-Q MILLI-Q (reagent grade water)</u>	35 µl
taq <u>TAQ</u> polymerase (5 U/µl)	1 µl
PCR reaction conditions:	
94°C x 1 min (PAD)	
94°C x 30 sec (denaturation)	
52°C x 30 sec (annealing of primers to template)	
72°C x 1 min (primer elongation)	

Please delete the paragraph bridging pages 33-34, and replace it with the following paragraph:

The nucleotide sequence on the 3'-side of the DNA fragment obtained by the degenerated PCR was obtained by PCR using a primer prepared based on the information obtained by determination of the nucleotide sequence in (4) above and an oligo dT primer. 3 µl of the first strand cDNA prepared in (2) above was used as a template. The prepared primer was 5'-ATGGCTCTTTCAAAGCGAGGTG-3' (primer 7) (SEQ ID NO: 21).

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 taq <u>TAQ</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
20 µM primer 7	1 µl
10 µM oligo dT primer	1 µl
<u>Milli-Q MILLI-Q (reagent grade water)</u>	35 µl
Faq <u>TAQ</u> polymerase (5 U/µl)	1 µl
PCR reaction conditions:	
94°C x 1 minute (PAD)	
94°C x 30 seconds (denaturation)	

52°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph bridging pages 34-35, and replace it with the following paragraph:

Based on the obtained full-length nucleotide sequence, a primer was produced with a portion corresponding to the N-terminus of the protein. An oligo dT primer was used as a primer corresponding to the C-terminal side thereof. Thereafter, using such primers, PCR was carried out employing the first strand cDNA prepared in (2) above as a template.

Primer used:

5'-GGGGGATCCGACCATGGCTCTTTCAAAGCGAGGTG-3' (primer 8) (SEQ ID NO: 22)

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 pyrobest <u>PYROBEST</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
100 µM primer 8	1 µl
100 µM oligo dT primer	1 µl
Milli-Q <u>MILLI-Q</u> (reagent grade water)	35 µl
Pyrobest <u>PYROBEST</u> polymerase (5 U/µl)	1 µl

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

52°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph bridging pages 36-37, and replace it with the following paragraph:

A fluorescent protein gene was isolated from coral emitting a fluorescence. *Acropora* sp. was used as a material. *Acropora* sp. was crushed with a hammer, and 15 ml of "TRIzol" TRIZOL (reagent for RNA preparation/isolation) (GIBCO BRL) was then added to 5 g of the

crushed *Montipora* sp. Thereafter, the obtained mixture was stirred and then centrifuged at 1,500 x g for 10 minutes. Thereafter, 3 ml of chloroform was added to the obtained supernatant, and the mixture was then stirred for 15 seconds. Thereafter, the mixture was left at rest for 3 minutes. The resultant was then centrifuged at 7,500 x g for 15 minutes. Thereafter, 7.5 ml of isopropanol was added to the obtained supernatant, and the mixture was then stirred for 15 seconds, followed by leaving the mixture at rest for 10 minutes. Thereafter, the resultant was centrifuged at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and 6 ml of 70% ethanol was added to the residue, followed by centrifugation at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and the precipitate was then dissolved in 200 µl of DEPC water. Total RNA dissolved in the DEPC water was 100 times diluted, and the values of O.D.260 and O.D.280 were then measured, so as to determine RNA concentration. As a result, 220 µg of total RNA was obtained.

Please delete the paragraph bridging pages 37-38, and replace it with the following paragraph:

3 µl of the synthesized first strand cDNA (33 µl) was used as a template to carry out PCR. Primers were produced by making comparison among the amino acid sequences of known fluorescent proteins, extracting similar portions, and converting them to nucleotide sequences.

Primers used:

5'-GAAGGRTGYGTCAAYGGRCA Y-3' (primer 1) (SEQ ID NO: 15)

5'-ACVGGDCCATYDGVAAAGAAARTT-3' (primer 2) (SEQ ID NO: 16)

R represents A or G; Y represents C or T; V represents A, C, or G; D represents A, G, or T

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 <del>taq</del> <u>TAQ</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
100 µM primer 1	1 µl
100 µM primer 2	1 µl
Milli-Q <u>MILLI-Q</u> (reagent grade water)	35 µl
taq <u>TAQ</u> polymerase (5 U/µl)	1 µl

## PCR reaction conditions:

94°C x 1 min (PAD)

94°C x 30 sec (denaturation)

52°C x 30 sec (annealing of primers to template)

72°C x 1 min (primer elongation)

Please delete the paragraph bridging pages 39-40, and replace it with the following paragraph:

The nucleotide sequence on the 3'-side of the DNA fragment obtained by the degenerated PCR was obtained by PCR, using a primer prepared based on the information obtained by determination of the nucleotide sequence in (4) above and an oligo dT primer. 3 µl of the first strand cDNA prepared in (2) above was used as a template. The prepared primer was 5'-ATGGTGTCTTATTCAAAGCAAGGCATCGACA-3' (primer 7) (SEQ ID NO: 25).

## Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 <del>taq</del> <u>TAQ</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
20 µM primer 7	1 µl
10 µM oligo dT primer	1 µl
<u>Milli-Q</u> <u>MILLI-Q</u> (reagent grade water)	35 µl
<del>Taq</del> <u>TAQ</u> polymerase (5 U/µl)	1 µl

## PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

55°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph on page 41, lines 5-23, and replace it with the following paragraph:

Using a primer produced with a portion corresponding to the N-terminus of the obtained full-length nucleotide sequence of the protein and an oligo dT primer, PCR was carried out employing the first strand cDNA prepared in (2) above as a template.

Primer used:

5'-CGGGATCCGACCATGGTGTCTTATTCAAAGCAAGGCATCGCAC-3' (primer 8) (SEQ ID NO: 26)

Composition of PCR reaction solution:

Template (first strand cDNA)	3 $\mu$ l
X10 <u>pyrobest</u> <u>PYROBEST</u> (polymerase) buffer	5 $\mu$ l
2.5 mM dNTPs	4 $\mu$ l
20 $\mu$ M primer 8	1 $\mu$ l
20 $\mu$ M oligo dT primer	1 $\mu$ l
<u>Milli-Q</u> <u>MILLI-Q</u> (reagent grade water)	35 $\mu$ l
<u>Pyrobest</u> <u>PYROBEST</u> polymerase (5 U/ $\mu$ l)	1 $\mu$ l

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

55°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph on page 43, lines 10-25, and replace it with the following paragraph:

A fluorescent protein gene was isolated from coral emitting a fluorescence. *Acropora* sp. was used as a material. *Acropora* sp. was crushed with a hammer, and 15 ml of "~~TRIzol~~" TRIZOL (reagent for RNA preparation/isolation) (GIBCO BRL) was then added to 5 g of the crushed *Acropora* sp. Thereafter, the obtained mixture was stirred and then centrifuged at 1,500 x g for 10 minutes. Thereafter, 3 ml of chloroform was added to the obtained supernatant, and the mixture was then stirred for 15 seconds. Thereafter, the mixture was left at rest for 3 minutes. The resultant was then centrifuged at 7,500 x g for 15 minutes. Thereafter, 7.5 ml of isopropanol was added to the obtained supernatant, and the mixture was then stirred for 15

seconds, followed by leaving the mixture at rest for 10 minutes. Thereafter, the resultant was centrifuged at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and 6 ml of 70% ethanol was added to the residue, followed by centrifugation at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and the precipitate was then dissolved in 200 µl of DEPC water. Total RNA dissolved in the DEPC water was 100 times diluted, and the values of O.D.260 and O.D.280 were then measured, so as to determine RNA concentration. As a result, 220 µg of total RNA was obtained.

Please delete the paragraph on page 44, lines 4-24, and replace it with the following paragraph:

3 µl of the synthesized first strand cDNA (33 µl) was used as a template to carry out PCR. Primers were produced by making comparison among the amino acid sequences of known fluorescent proteins, extracting similar portions, and converting them to nucleotide sequences.

Primers used:

5'-GAAGGRTGYGTCAAYGGRCAY-3' (primer 1) (SEQ ID NO: 15)

5'-ACVGGDCCATYDGVAAAGAAATT-3' (primer 2) (SEQ ID NO: 16)

R represents A or G; Y represents C or T; V represents A, C, or G; D represents A, G, or T

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 taq <u>TAQ</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
100 µM primer 1	1 µl
100 µM primer 2	1 µl
Milli-Q <u>MILLI-Q</u> (reagent grade water)	35 µl
taq <u>TAQ</u> polymerase (5 U/µl)	1 µl

PCR reaction conditions:

94°C x 1 min (PAD)

94°C x 30 sec (denaturation)

52°C x 30 sec (annealing of primers to template)

72°C x 1 min (primer elongation)

Please delete the paragraph bridging pages 46-47, and replace it with the following paragraph:

The nucleotide sequence on the 3'-side of the DNA fragment obtained by the degenerated PCR was obtained by PCR using a primer prepared based on the information obtained by determination of the nucleotide sequence in (4) above and an oligo dT primer. 3 µl of the first strand cDNA prepared in (2) above was used as a template. The prepared primer was 5'-ATGGTGTCTTATTCAAAGCAAGGCATCGCACA-3' (primer 7) (SEQ ID NO: 29).

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 <u>taq</u> <u>TAQ</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
20 µM primer 7	1 µl
10 µM oligo dT primer	1 µl
Milli-Q <u>MILLI-Q</u> (reagent grade water)	35 µl
Taq <u>TAQ</u> polymerase (5 U/µl)	1 µl

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

55°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph bridging pages 47-48, and replace it with the following paragraph:

Using a primer produced with a portion corresponding to the N-terminus of the obtained full-length nucleotide sequence of the protein and an oligo dT primer, PCR was carried out employing the first strand cDNA prepared in (2) above as a template.

Primer used:

5'-CGGGATCCGACCATGGTGTCTTATTCAAAGCAAGGCATCGCACA-3' (primer 8)  
(SEQ ID NO: 30)

Composition of PCR reaction solution:



Template (first strand cDNA)	3 $\mu$ l
X10 <del>pyrobest</del> <u>PYROBEST</u> (polymerase) buffer	5 $\mu$ l
2.5 mM dNTPs	4 $\mu$ l
20 $\mu$ M primer 8	1 $\mu$ l
20 $\mu$ M oligo dT primer	1 $\mu$ l
Milli-Q <u>MILLI-Q</u> (reagent grade water)	35 $\mu$ l
<del>Pyrobest</del> <u>PYROBEST</u> polymerase (5 U/ $\mu$ l)	1 $\mu$ l

## PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

55°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph on page 50, lines 3-18, and replace it with the following paragraph:

A fluorescent protein gene was isolated from coral. Montipora sp. was used as a material. A frozen Montipora sp. was crushed in a mortar, and 7.5 ml of ~~"Trizol"~~ TRIZOL (reagent for RNA preparation/isolation) (GIBCO BRL) was then added to 2 g (wet weight) of the crushed Montipora sp. Thereafter, the obtained mixture was homogenized and then centrifuged at 1,500 x g for 10 minutes. Thereafter, 1.5 ml of chloroform was added to the obtained supernatant, and the mixture was then stirred for 15 seconds. Thereafter, the mixture was left at rest for 3 minutes. The resultant was then centrifuged at 7,500 x g for 15 minutes. Thereafter, 3.75 ml of isopropanol was added to the obtained supernatant, and the mixture was then stirred for 15 seconds, followed by leaving the mixture at rest for 10 minutes. Thereafter, the resultant was centrifuged at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and 6 ml of 70% ethanol was added to the residue, followed by centrifugation at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and the precipitate was then dissolved in 200  $\mu$ l of DEPC water. Total RNA dissolved in the DEPC water was 100 times diluted, and the values of O.D.260 and O.D.280 were then measured, so as to determine RNA concentration. As a result, 22  $\mu$ g of total RNA was obtained.

Please delete the paragraph bridging pages 50-51, and replace it with the following paragraph:

Primers were produced by making comparison among the amino acid sequences of known fluorescent proteins, extracting similar portions, and converting them to nucleotide sequences.

Primers used:

5'-GAAGGRTGYGTCAAYGGRCAY-3' (primer 1) (SEQ ID NO: 15)

5'-ACVGGDCCATYDGVAAAGAAARTT-3' (primer 2) (SEQ ID NO: 16)

I represents inosine; R represents A or G; Y represents C or T; V represents A, C, or G; D represents A, G, or T; S represents C or G; H represents A, T, or C

Composition of PCR reaction solution:

Template (first strand cDNA)	3 $\mu$ l
X10 <u>taq</u> <u>TAQ</u> (polymerase) buffer	5 $\mu$ l
2.5 mM dNTPs	4 $\mu$ l
100 $\mu$ M primer 1	1 $\mu$ l
100 $\mu$ M primer 2	1 $\mu$ l
Milli-Q <u>MILLI-Q</u> (reagent grade water)	35 $\mu$ l
<u>taq</u> <u>TAQ</u> polymerase (5 U/ $\mu$ l)	1 $\mu$ l

PCR reaction conditions:

94°C x 1 min (PAD)

94°C x 30 sec (denaturation)

52°C x 30 sec (annealing of primers to template)

72°C x 1 min (primer elongation)

Please delete the paragraph on page 53, lines 2-20, and replace it with the following paragraph:

The nucleotide sequence on the 3'-side of the DNA fragment obtained by the degenerated PCR was obtained by PCR using a primer prepared based on the information obtained by determination of the nucleotide sequence in (4) above and an oligo dT primer. 3  $\mu$ l of the first

strand cDNA prepared in (2) above was used as a template. The prepared primer was 5'-ATGGCTCTTTCAAAGCACGGTC-3' (primer 7) (SEQ ID NO: 31).

Composition of PCR reaction solution:

Template (first strand cDNA)	3 $\mu$ l
X10 $\text{taq}$ <u>TAQ</u> (polymerase) buffer	5 $\mu$ l
2.5 mM dNTPs	4 $\mu$ l
20 $\mu$ M primer 7	1 $\mu$ l
10 $\mu$ M oligo dT primer	1 $\mu$ l
<u>Milli-Q MILLI-Q</u> (reagent grade water)	35 $\mu$ l
$\text{TaQ}$ <u>TAQ</u> polymerase (5 U/ $\mu$ l)	1 $\mu$ l

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

52°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph on page 54, lines 7-27, and replace it with the following paragraph:

Based on the obtained full-length nucleotide sequence, a primer was produced with a portion corresponding to the N-terminus of the protein. An oligo dT primer was used as a primer corresponding to the C-terminal side thereof. Thereafter, using such primers, PCR was carried out employing the first strand cDNA prepared in (2) above as a template.

Primer used:

5'-GGGGGATCCGACCATGGCTCTTTCAAAGCACGGTC-3' (primer 8) (SEQ ID NO: 32)

Composition of PCR reaction solution:

Template (first strand cDNA)	3 $\mu$ l
X10 <del>pyrobest</del> <u>PYROBEST</u> (polymerase) buffer	5 $\mu$ l
2.5 mM dNTPs	4 $\mu$ l
100 $\mu$ M primer 8	1 $\mu$ l
100 $\mu$ M oligo dT primer	1 $\mu$ l

~~Milli-Q~~ MILLI-Q (reagent grade water) 35 µl

Pyrobest PYROBEST polymerase (5 U/µl) 1 µl

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

52°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph bridging pages 56-57, and replace it with the following paragraph:

A chromoprotein gene was isolated from sea anemone. A single body of *Actinia equina* presenting a red color was used as a material. A frozen *Actinia equina* was crushed in a mortar, and 7.5 ml of ~~"TRIzol"~~ TRIZOL (reagent for RNA preparation/isolation) (GIBCO BRL) was then added to 1 g (wet weight) of the crushed *Actinia equina*. Thereafter, the obtained mixture was homogenized and then centrifuged at 1,500 x g for 10 minutes. Thereafter, 1.5 ml of chloroform was added to the obtained supernatant, and the mixture was then stirred for 15 seconds. Thereafter, the mixture was left at rest for 3 minutes. The resultant was then centrifuged at 7,500 x g for 15 minutes. Thereafter, 3.75 ml of isopropanol was added to the obtained supernatant, and the mixture was then stirred for 15 seconds, followed by leaving the mixture at rest for 10 minutes. Thereafter, the resultant was centrifuged at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and 6 ml of 70% ethanol was added to the residue, followed by centrifugation at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and the precipitate was then dissolved in 200 µl of DEPC water. Total RNA dissolved in the DEPC water was 100 times diluted, and the values of O.D.260 and O.D.280 were then measured, so as to determine RNA concentration. As a result, 1.2 mg of total RNA was obtained.

Please delete the paragraph bridging pages 57-58, and replace it with the following paragraph:

Primers were produced by making comparison among the amino acid sequences of known fluorescent proteins, extracting similar portions, and converting them to nucleotide sequences.

Primers used:

5'- GGI WSB GTI AAY GGV CAY DAN TT -3' (primer 1) (SEQ ID NO: 33); and  
5'- GTC ITC TTY TGC ACI ACI GGI CCA TYD GVA GGA AA -3' (primer 2) (SEQ ID NO: 34).

I represents inosine; R represents A or G; Y represents C or T; V represents A, C, or G; D represents A, G, or T; S represents C or G; H represents A, T, or C

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 <del>taq</del> <u>TAQ</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
100 µM primer 1	1 µl
100 µM primer 2	1 µl
<del>Milli-Q</del> <u>MILLI-Q</u> (reagent grade water)	35 µl
<del>Taq</del> <u>TAQ</u> polymerase (5 U/µl)	1 µl

PCR reaction conditions:

94°C x 1 minute (PAD)  
94°C x 30 seconds (denaturation)  
58°C x 30 seconds (annealing of primers to template)  
72°C x 1 minute (primer elongation)

Please delete the paragraph bridging pages 59-60, and replace it with the following paragraph:

A primer was produced with a portion corresponding to the N-terminus of the protein obtained in (5) above. An oligo dT primer was used as a primer corresponding to the C-terminal side thereof. Thereafter, using such primers, PCR was carried out employing the first strand cDNA prepared in (2) above as a template.

Primer used:

5'-CCC GGA TCC GAC CAT GGT GTC TTC ATT GGT TAA GAA -3' (primer 7) (SEQ ID NO: 37)

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 <del>pyrobest</del> <u>PYROBEST</u> (polymerase) buffer	5 µl
2.5 mM dNTPs	4 µl
100 µM primer 8	1 µl
100 µM oligo dT primer	1 µl
<del>Milli-Q</del> <u>MILLI-Q</u> (reagent grade water)	35 µl
<del>Pyrobest</del> <u>PYROBEST</u> polymerase (5 U/µl)	1 µl

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

52°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

Please delete the paragraph on page 62, lines 2-17, and replace it with the following paragraph:

A fluorescent protein gene was isolated from coral emitting a fluorescence. *Lobophytum crassum* was used as a material. This coral was crushed with a hammer, and 7.5 ml of "TRIZOL" TRIZOL (reagent for RNA preparation/isolation) (GIBCO BRL) was then added to 4 g (wet weight) of the crushed *Lobophytum crassum*. Thereafter, the obtained mixture was stirred and then centrifuged at 1,500 x g for 10 minutes. Thereafter, 1.5 ml of chloroform was added to the obtained supernatant, and the mixture was then stirred for 15 seconds. Thereafter, the mixture was left at rest for 3 minutes. The resultant was then centrifuged at 7,500 x g for 15 minutes. Thereafter, 3.75 ml of isopropanol was added to the obtained supernatant, and the mixture was then stirred for 15 seconds, followed by leaving the mixture at rest for 10 minutes. Thereafter, the resultant was centrifuged at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and 6 ml of 70% ethanol was added to the residue, followed by centrifugation at 17,000 x g for 10 minutes. The obtained supernatant was discarded, and the precipitate was then

dissolved in 200  $\mu$ l of DEPC water. Total RNA dissolved in the DEPC water was 100 times diluted, and the values of O.D.260 and O.D.280 were then measured, so as to determine RNA concentration. As a result, 390  $\mu$ g of total RNA was obtained.

Please delete the paragraph bridging pages 62-63, and replace it with the following paragraph:

3  $\mu$ l of the synthesized first strand cDNA (33  $\mu$ l) was used as a template to carry out PCR. Primers were produced by making comparison among the amino acid sequences of known fluorescent proteins, extracting similar portions, and converting them to nucleotide sequences.

Primers used:

5'-GRR AGG IWS BGT HAA YGG VCA-3' (Primer 1) (SEQ ID NO: 38); and

5'-AACTGGAAGAATTCGCGCCGAGGAA-3' (Primer 2) (SEQ ID NO :39).

R represents A or G; Y represents C or T; V represents A, C, or G; D represents A, G, or T

Composition of PCR reaction solution:

Template (first strand cDNA)	3 $\mu$ l
X10 <del>taq</del> <u>TAQ</u> (polymerase) buffer	5 $\mu$ l
2.5 mM dNTPs	4 $\mu$ l
100 $\mu$ M primer 1	1 $\mu$ l
100 $\mu$ M primer 2	1 $\mu$ l
Milli-Q <u>MILLI-Q</u> (reagent grade water)	35 $\mu$ l
Taq <u>TAQ</u> polymerase (5 U/ $\mu$ l)	1 $\mu$ l

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

52°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)

72°C x 7 minutes (final elongation)

4°C (maintenance)

Please delete the paragraph on page 65, lines 5-24, and replace it with the following paragraph:

A primer was produced with a portion corresponding to the N-terminus of the protein obtained in (5) above. An oligo dT primer was used as a primer corresponding to the C-terminal side thereof. Thereafter, using such primers, PCR was carried out employing the first strand cDNA prepared in (2) above as a template.

Primer used:

5'-CCC GGA TCC GAT GAG TGT GAT TAC AWC AGA AAT GAA GAT GGA GC -3'  
(Primer 8) (SEQ ID NO: 44)

Composition of PCR reaction solution:

Template (first strand cDNA)	3 µl
X10 <del>taq</del> <u>TAQ (polymerase)</u> buffer	5 µl
2.5 mM dNTPs	4 µl
100 µM primer 8	1 µl
100 µM oligo dT primer	1 µl
<del>Milli-Q</del> <u>MILLI-Q</u> (reagent grade water)	35 µl
<del>Pyrobest</del> <u>PYROBEST</u> polymerase (5 U/µl)	1 µl

PCR reaction conditions:

94°C x 1 minute (PAD)

94°C x 30 seconds (denaturation)

52°C x 30 seconds (annealing of primers to template)

72°C x 1 minute (primer elongation)